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PRELIMINARY LIST OF PLANTS

Growing without cultivation in the vicinity of
Manchester, New Hampshire



Compiled by
FREDERICK W. BATCHELDER
Revised and Enlarged, 1909

Published by
Manchester Institute of Arts and Sciences
Manchester, N. H.

INTRODUCTORY NOTE

In the following revised and enlarged Preliminary List the arrangement of plant-families and the nomenclature are those of Gray's New Manual of Botany, recently published under the auspices of Harvard University.

The compiler has not hesitated to include a number of plants of special interest from points as far north as the Winnepesaukee basin, such as Franklin, Laconia and Sandwich, there being at present no danger of trespassing on the working field of other organizations.

The object of publishing a Preliminary List being to stimulate inquiry and observation and to elicit comparison, questions and criticisms will be always welcome. Additions, properly vouched for, will be gladly received, and will be incorporated in future lists.

PRELIMINARY

LIST OF PLANTS

Growing without cultivation in the vicinity
of Manchester, New Hampshire

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PTERIDOPHYTA

Polypodiaceæ

Polypodium vulgare L.	Common
Phegopteris polypodioides Fée.	Common
hexagonoptera (Michx.) Fée.	Less common
Dryopteris (L.) Fée.	Common
Adiantum pedatum L.	Abundant, but of irregular distribution
Pteris aquilina L.	Common
Woodwardia virginica (L.) Sm.	Not rare
Asplenium Trichomanes L.	Not common
platyneuron (L.) Oakes.	Locally abundant ; often called " rock fern "
acrostichoides Sw.	Not rare
Filix-femina (L.) Bernh.	Common
Camptosorus rhizophyllus (L.) Link.	Reported from Windham and Hudson
Polystichum acrostichoides (Michx.) Schott.	Common

Aspidium Thelypteris (L.) Sw.	Common
noveboracense (L.) Sw.	Common
marginale (L.) Sw.	Common
Bootii Tuckerm.	Common
cristatum (L.) Sw.	Common
“ var. Clintonianum D. C. Eaton.	Occasional
spinulosum (O. F. Müller.) Sw.	Not common
“ var. intermedium (Muhl.) D. C. Eaton.	Common
“ var. dilatatum (Hoffm.) Hook.	Not rare
Cystopteris fragilis (L.) Bernh.	Rather rare
Woodsia ilvensis (L.) R. Br.	Not rare
obtusa (Spreng.) Torr.	Rare
Dicksonia punctilobula (Michx.) Gray.	Common
Onoclea sensibilis L.	Common
“ var. obtusilobata (Schkuhr.) Torr.	Occasional
Struthiopteris (L.) Hoffm.	Of irregular distribution

Osmundaceæ

Osmunda regalis L.	Common
Claytoniana L.	Common
cinnamomea L.	Common
“ var. frondosa Gray.	Occasional
“ var. incisa J. W. Huntington.	Occasional

Ophioglossaceæ

Ophioglossum vulgatum L.	Rare, or rarely seen
Botrychium simplex E. Hitchcock.	Manchester. Rare
lanceolatum (Gmel.) Angstroem,	
var. angustisegmentum Pease and Moore.	
	Rather rare

ramosum (Roth.) Aschers.	Less rare
obliquum Muhl.	Common
“ var. dissectum (Spreng.) Clute,	Common
ternatum (Thunb.) Sw., var. intermedium	
D. C. Eaton.	Not common
virginianum (L.) Sw.	Common

Equisetaceæ

Equisetum arvense L.	Common
sylvaticum L.	Common
palustre L. Manchester. (<i>F. W. B.</i>)	Rare
fluviatile L.	Not rare
hyemale L., var. affine (Engelm.) A.A.Eaton.	Common

Lycopodiaceæ

Lycopodium lucidulum Michx.	Common
inundatum L.	Not rare
annotinum L.	Common northward
clavatum L.	Common
“ var. monostachyon Grev. and Hook.	
Sandwich.	Rare ?
obscurum L.	Common
“ var. dendroideum (Michx.) D. C. Eaton.	Common
complanatum L.	Common
“ var. flabelliforme Fernald.	Common
tristachyum Pursh.	Common

Selaginellaceæ

Selaginella rupestris (L.) Spring.	Common
apus (L.) Spring. Hudson.	Rare ?

Isœtaceæ

Isœtes echinospora Dur., var. **Braunii** (Dur.) Engelm.
In sandy ponds

SPERMATOPHYTA**GYMNOSPERMÆ****Taxaceæ**

Taxus Canadensis Marsh. Common

Pinaceæ

Pinus Strobus L. Common

rigida Mill. Common

resinosa Ait. Less common

Larix laricina (Du Roi) Koch. Common

Picea rubra (Du Roi) Dietr. Common

mariana (Mill.) BSP. Common

Abies balsamea (L.) Mill. Common northward

Tsuga Canadensis (L.) Carr. Common

Chamæcyparis thyoides (L.) BSP.
Manchester. The only known station

Juniperus communis L. Francetown. Very rare

“ var. **depressa** Pursh. Common

virginiana L. Common

ANGIOSPERMÆ**Typhaceæ**

Typha latifolia L. Common

angustifolia L. Windham. (*Geo. Dimmock*) Rare

Sparganiaceæ

Sparganium eurycarpum Engelm.

americanum Nutt.

Juncaginaceæ

Scheuchzeria palustris L. Stevens Pond, Manchester.

Alismaceæ

Sagittaria latifolia Willd.	Common
heterophylla Pursh.	Not common
graminea Michx.	Not rare
Alisma Plantago-aquatica L.	Common

Gramineæ

Andropogon scoparius Michx.	Common
furcatus Muhl.	Common
Sorghastrum nutans (L.) Nash.	Less common
Digitaria filiformis (L.) Koehler. Manchester.	Rare
humifusa Pers.	Common
sanguinalis (L.) Scop.	Common
Leptoloma cognatum (Schultes) Chase.	
Concord. Bow.	Rare
Paspalum Muhlenbergii Nash.	Rather common
Panicum capillare L.	Common
philadelphicum Bernh.	Less common
miliaceum L.	Occasional
dichotomiflorum Michx.	Not rare
virgatum L.	Rather rare
agrostoides Spreng.	Common
depauperatum Muhl.	Not common
linearifolium Scribn.	Common
dichotomum L.	Common
spretum Schultes.	Common
huachucae Ashe.	Common

columbianum Scribn.	Common
sphaerocarpon Ell.	Rare
Scribnerianum Nash.	Common
xanthophysum Gray.	Not rare
clandestinum L.	Common
Boscii Poir.	Common
latifolium L.	Common
Echinochloa crusgalli (L.) Beauv.	Common
Setaria glauca (L.) Beauv.	Common
viridis (L.) Beauv.	Common
italica (L.) Beauv.	A common escape
Cenchrus carolinianus Walt.	Common along river banks
Zizania palustris L.	Rare
Leersia virginica Willd.	Common
oryzoides (L.) Sw.	Common
Phalaris canariensis L.	On dumps
arundinacea L.	Not common
Anthoxanthum odoratum L.	Common
Oryzopsis pungens (Torr.) Hitchc.	Common
asperifolia Michx.	Common
racemosa (Sm.) Ricker. Pelham.	Rare?
Aristida dichotoma Michx.	Common
gracilis Ell.	Abundant in Pelham
Muhlenbergia tenuiflora (Willd.) BSP.	Not rare
sylvatica Torr.	Common
mexicana (L.) Trin.	Common
racemosa (Michx.) BSP.	Common
Schreberi J. F. Gmel.	Apparently introduced ; not common
Brachyelytrum erectum (Schreb.) Beauv.	Common
Phleum pratense L.	A common escape

Alopecurus pratensis L.	Rare?
Sporobolus vaginiflorus (Torr.) Wood.	Common
neglectus Nash.	Common
Agrostis alba L.	Common
“ var. vulgaris (With.) Thurb.	Common
[sylvatica L.] a teratological form of <i>A. alba</i> .	Not rare
hyemalis (Walt.) BSP.	Common
perennans (Walt.) Tuckerm.	Common
canina L.	Not common
Calamagrostis Pickeringii Gray.	
Pelham	Rare
canadensis (Michx.) Beauv.	Common
cinnoides (Muhl.) Barton.	Not common
Ammophila arenaria (L.) Link.	
Hudson. Introduced as a sand-binder	
Cinna arundinacea L.	Common
latifolia (Trev.) Griseb.	Common
Holcus lanatus L.	Not common
Sphenopholis obtusata (Michx.) Scribn.,	
var. lobata (Trin.) Scribn.	
Manchester	Rare
Trisetum spicatum (L.) Richter.	
Concord	Not common
Deschampsia flexuosa (L.) Trin.	Common
Avena fatua L.	On dump; very rare
sativa L.	A common escape
Danthonia spicata (L.) Beauv.	Common
compressa Aust.	Common, especially in wood roads
Spartina Michauxiana Hitchc.	
Bank of Merrimack River	Rare

Phragmites communis Trin.		
	Hudson (<i>N. Wentworth</i>)	Rare
Tridens flavus (L.) Hitchc.	Pelham	Rare
Eragrostis capillaris (L.) Nees.		Not common
Frankii (Fisch. Mey. & Lall.) Steud.		Very rare
pilosa (L.) Beauv.		Common
megastachya (Koehler) Link.		Not common
minor Host.		Rare
pectinacea (Michx.) Steud.		Not rare
Melica striata (Michx.) Hitchc.		
	Laconia	Rare?
Dactylis glomerata L.		Common
Poa annua L.		Common
compressa L.		Common
nemoralis L.		Common
triflora Gilib.		Common
pratensis L.		Common
trivialis L.		Rare?
Glyceria Torreyana (Spreng.) Hitchc.		Common
obtusa (Muhl.) Trin.		
	Pelham. Manchester	Rare
canadensis (Michx.) Trin.		Common
laxa Scribn.		Not rare
nervata (Willd.) Trin.		Common
grandis Wats.		Common
pallida (Torr.) Trin.		Common
borealis (Nash.) Batchelder.		Common
acutiflora Torr.	Manchester	Rare
Festuca rubra L.		Common
ovina L.		Not common
elatior L.		Common

nutans Spreng.	Concord	Rare
Bromus secalinus L.		Not common
tectorum L.		Rare
ciliatus L.		Common
Nardus stricta L.	Andover (<i>Dr. A. A. Briggs</i>)	Very rare
Agropyron repens (L.) Beauv.		Common
tenerum Vasey.	Laconia	Rare?
Hordeum jubatum L.		Rare
Elymus virginicus L.		Common
canadensis L.		Common
Hystrix patula Moench.		Not common

Cyperaceæ

Cyperus diandrus Torr.

rivularis Kunth.

dentatus Torr.

strigosus L.

Common

filiculmis Vahl., var. **macilentus** Fernald.

Common

Dulichium arundinaceum (L.) Britton.

Common

Eleocharis Robbinsii Oakes.

diandra C. Wright. Sandy shore of Merrimack River,
Manchester, (*F. W. B.*) First collected in 1906.

obtusata (Willd.) Schultes.

Common

palustris (L.) R. & S.

Common

acicularis (L.) R. & S.

Common

tenuis (Willd.) Schultes.

Common

Stenophyllus capillaris (L.) Britton.

Common

Scirpus debilis Pursh. Sandy shore of Merrimack River,
Manchester, (*F. W. B.*) 1908.

Smithii Gray.

Shore of Lake Massabesic, Auburn,

(*F. W. B.*) 1908.

americanus Pers.	Merrimack River, Manchester, and Lake Massabesic, Auburn, (<i>F. W. B.</i>) 1908.	
validus Vahl.		Not rare
sylvaticus L.		Common
atrovirens Muhl.		Common
cyperinus (L.) Kunth.		Common
“ var. condensatus Fernald.		Not rare
Eriophorum callitrix Cham.		
gracile Roth.		Common
tenellum Nutt.		
viridi-carinatum (Engelm.) Fernald.		Common
virginicum L.		Common
Rynchospora alba (L.) Vahl.		Common
glomerata (L.) Vahl.		Common
Cladium mariscoides (Muhl.) Torr.		Not rare
Carex scoparia Schkuhr.		
tribuloides Wahlenb.		
siccata Dewey.		
mirabilis Dewey.		
straminea Willd.		
festucacea Schkuhr.		
stellulata Good.		
“ var. cephalantha (Bailey) Fernald.		
canescens L.		
brunnescens Poir.		
bromoides Schkuhr.		
Deweyana Schwein.		
trisperma Dewey.		
tenella Schkuhr.		
retroflexa Muhl.		Rare
Muhlenbergii Schkuhr.		

cephalophora Muhl.

vulpinoidea Michx.

stipata Muhl.

crinita Lam.

“ var. **gynandra** (Schwein.) Schwein. and Torr.

Goodenowii J. Gay.

stricta Lam.

“ var. **angustata** (Boott) Bailey.

leptalea Wahlenb.

virescens Muhl.

gracillima Schwein.

umbellata Schkuhr.

communis Bailey.

novæ-angliæ Schwein. Concord.

Rare

pennsylvanica Lam.

pallescens L.

platyphylla Carey.

digitalis Willd.

laxiflora Lam.

“ var. **patulifolia** (Dewey) Carey.

grisea Wahlenb.

flava L.

longirostris Torr.

arctata Boott.

debilis Michx., var. **Rudgei** Bailey.

scabrata Schwein.

filiformis L.

lanuginosa Michx.

Houghtonii Torr.

vestita Willd.

riparia W. Curtis.

Pseudo-Cyperus L.**comosa** Boott.**hystericina** Muhl.**lurida** Wahlenb.**retrorsa** Schwein.**lupulina** Muhl.**intumescens** Rudge.“ var. **Fernaldi** Bailey.**folliculata** L.**vesicaria** L.**rostrata** Stokes.“ var. **utriculata** (Boott) Bailey.**Tuckermani** Dewey.**Araceæ****Arisæma triphyllum** (L.) Schott.

Common

Peltandra virginica (L.) Kunth.

Common

Calla palustris L.

Rare

Symplocarpus foetidus (L.) Nutt.

Common

Acorus Calamus L.

Common

Lemnaceæ**Spirodela polyrhiza** (L.) Schleid.**Lemna trisulca** L.**minor** L.**Eriocaulaceæ****Eriocaulon articulatum** (Huds.) Morong.

Common

Xyridaceæ**Xyris montana** Ries. Concord.

Rare

flexuosa Muhl.

Common

Pontederiaceæ

Pontederia cordata L. Common

A form with white flowers has persisted many years in a pond in Manchester. (*W. H. Huse.*)

Juncaceæ

Juncus bufonius L. Common

tenuis Willd. Common

Greenii Oakes and Tuckerm. Common

filiformis L. Common ?

effusus L. Common

Canadensis J. Gay. Common

pelocarpus Mey. Common

acuminatus Michx. Common

articulatus L. Common

marginatus Rostk. Common

Luzula campestris (L.) DC.,
var. **multiflora** (Ehrh.) Čelak. Common

Liliaceæ

Veratrum viride Ait. Common

Oakesia sessilifolia (L.) Wats. Common

Lilium philadelphicum L. Common

canadense L. Common

Erythronium americanum Ker. Locally abundant

Ornithogalum umbellatum L. A common escape

Muscari botryoides (L.) Mill. A rare escape

Asparagus officinalis L. A common escape

Clintonia borealis (Ait.) Raf. Common

Smilacina racemosa (L.) Desf. Common

stellata (L.) Desf. Common

trifolia (L.) Desf. Concord. (*Mrs. G. L. Green.*) Rare ?

Maianthemum canadense Desf.	Common
Streptopus amplexifolius (L.) DC.	
Manchester. Sandwich.	Rare?
roseus Michx.	Concord. Sandwich. Less rare
Polygonatum biflorum (Walt.) Ell.	Common
commutatum (R. & S.) Dietr.	A garden escape
Medeola virginiana L.	Common
Trillium erectum L.	Rare
cernuum L.	Common
undulatum Willd.	Common
Smilax herbacea L.	Common
rotundifolia L.	Common

Amaryllidaceæ

Hypoxis hirsuta (L.) Coville.	Common
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Iridaceæ

Iris versicolor L.	Common
Sisyrinchium angustifolium Mill.	Common
gramineum Curtis. Pelham.	Rare?
atlanticum Bicknell.	Common

Orchidaceæ

Cypripedium arietinum R. Br.	
Franklin. Laconia. (F.W.B.)	Rare
parviflorum Salisb. East Concord.	Rare
“ var. pubescens (Willd.) Knight.	Locally abundant
hirsutum Mill.	
Very rare. Station at Concord recently destroyed	
acaule Ait.	Common
A form with the lip white has persisted many years at a station in Manchester.	

Orchis spectabilis L. Reported, but not yet verified

Habenaria bracteata (Willd.) R. Br.

flava (L.) Gray. Common

hyperborea (L.) R. Br.

dilatata (Pursh) Gray.

clavellata (Michx.) Spreng. Common

A form occurs with the lip pure white.

obtusata (Pursh) Richards.

Hookeri Torr. Common

orbiculata (Pursh) Torr.

macrophylla Goldie. Gilford. Sandwich.

blephariglottis (Willd.) Torr. Very rare

lacera (Michx.) R. Br. Common

psychodes (L.) Sw.

In the southern towns less common than **H. fimbriata**
Andrewsii White. (**H. lacera** x **H. psychodes**.)

Base of Whiteface Mountain, Waterville
(Mrs. F. W. Batchelder)

fimbriata (Ait.) R. Br. Common

Pogonia ophioglossoides (L.) Ker. Common

trianthophora (Sw.) BSP.

Meredith. (*F. W. B.*) Very rare

verticillata (Willd.) Nutt. Rare

Calopogon pulchellus (Sw.) R. Br. Common

Arethusa bulbosa L. Locally abundant

Spiranthes gracilis (Bigel.) Beck. Common

cernua (L.) Richard. Common

Romanzoffiana Cham.

Franklin, Sandwich. Not common

Epipactis repens (L.) Crantz., var. ophioides (Fernald) A. A. Eaton.	Rare?
tesselata (Lodd.) A. A. Eaton.	Common
pubescens (Willd.) A. A. Eaton.	Common
Corallorhiza trifida Chatelain.	Not rare
maculata Raf.	Common
odontorhiza Nutt.	Rare
Microstylis unifolia (Michx.) BSP.	Common
Liparis liliifolia (L.) Richard. Manchester. (<i>F. W. B.</i>)	Rare
Loeselii (L.) Richard. Concord. (<i>Miss S. F. Sanborn</i>)	Rare

Salicaceæ

Salix nigra Marsh.	Common
“ var. falcata (Pursh) Torr.	Common
lucida Muhl.	Not rare
fragilis L.	
alba L.	
babylonica L.	
cordata Muhl.	Common
discolor Muhl.	Common
humilis Marsh.	Common
tristis Ait.	Manchester. Rare
sericea Marsh.	Concord.
rostrata Richards.	Common
candida Flügge.	
purpurea L.	

Populus alba L.	A persistent escape
tremuloides Michx.	Common
grandidentata Michx.	Common
balsamifera L. Plymouth. (<i>W. H. Huse</i>)	Rare?
candicans Ait.	Common
nigra L., var. italica Du Roi.	A persistent escape

Myricaceæ

Myrica Gale L.	Common
carolinensis Mill.	Rare
asplenifolia L.	Common

Juglandaceæ

Juglans cinerea L.	Common
Carya ovata (Mill.) K. Koch.	Common
glabra (Mill.) Spach.	Common

Betulaceæ

Corylus americana Walt.	Common
rostrata Ait.	Less common
Ostrya virginiana (Mill.) K. Koch.	Common
Carpinus caroliniana Walt.	Common
Betula lenta L.	Common
lutea Michx. f.	Common
nigra L. Abundant in Pelham along Beaver Brook, and extending not less than four miles north of the Massachusetts line.	
populifolia Marsh.	Common
alba L., var. papyrifera (Marsh.) Spach.	Common
Alnus incana (L.) Moench.	Common
rugosa (Du Roi) Spreng.	Common

Fagaceæ

Fagus grandifolia Ehrh.	Common
Castanea dentata (Marsh.) Borkh.	Common
Quercus alba L.	Common
bicolor Willd.	Common
prinoides Willd.	Common, at least as far north as Hooksett
Prinus L.	Locally abundant
rubra L.	Common
“ var. ambigua (Michx. f.) Fernald.	Not rare
coccinea Muench.	Common about Manchester
velutina Lam.	Common
ilicifolia Wang.	Common

Urticaceæ

Ulmus fulva Michx.	
Bank of Piscataquog River, Goffstown. (<i>F.W.B.</i>)	Very rare
americana L.	Common
Humulus Lupulus L.	Common
japonicus Sieb. & Zucc.	A recent immigrant
Morus alba L.	Still persisting in the older towns
Urtica gracilis Ait.	Common
dioica L.	Becoming frequent
Laportea canadensis (L.) Gaud.	Common
Pilea pumila (L.) Gray.	Common
Boehmeria cylindrica (L.) Sw.	Common

Santalaceæ

Comandra umbellata (L.) Nutt.	Common
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Aristolochiaceæ

Asarum canadense L.	Rare ?
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Polygonaceæ

Rumex crispus L.	Common
obtusifolius L.	Common
Acetosella L.	Common
Polygonum aviculare L.	Common
erectum L.	Rare
lapathifolium L.	
amphibium L.	
Muhlenbergii (Meisn.) Wats.	Not rare
pennsylvanicum L.	Common
Careyi Olney.	Common
Hydropiper L.	Common
acre HBK.	Common
orientale L.	An occasional escape
Persicaria L.	Common
hydropiperoides Michx.	Common
arifolium L.	Common
sagittatum L.	Common
Convolvulus L.	
cilinode Michx.	
scandens L.	Common
cuspidatum Sieb. & Zucc.	A recent immigrant
Fagopyrum esculentum Moench.	A common escape
Polygonella articulata (L.) Meisn.	Common

Chenopodiaceæ

Chenopodium ambrosioides L.	On dumping grounds
Botrys L.	On dumping grounds
hybridum L.	Manchester. (<i>F. W. B.</i>) Rare?
album L.	Common

Amaranthaceæ

Amaranthus retroflexus L.	Common
hybridus L.	Common
“ forma hypochondriacus (L.) Robinson.	
paniculatus L.	
græcizans L.	Common
blitoides Wats.	A railroad escape
spinosus L.	A recent immigrant

Phytolaccaceæ

Phytolacca decandra L.	Not rare
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Illecebraceæ

Scleranthus annuus L.	Common
Anychia canadensis (L.) BSP.	
Windham. (<i>F. W. B.</i>)	Rare

Aizoaceæ

Mollugo verticillata L.	Common
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Caryophyllaceæ

Spergularia rubra (L.) J. & C. Presl.	Common
Spergula arvensis L.	Common
Sagina procumbens L.	Rare?
Arenaria lateriflora L.	Not common
Stellaria borealis Bigel.	Not rare
uliginosa Murr.	Common
longifolia Muhl.	Common
graminea L.	Common
media (L.) Cyrill.	Common
Cerastium arvense L.	Not common
vulgatum L.	Common

Agrostemma Githago L.	Occasional
Lychnis Flos-cuculi L.	Occasional
dioica L.	Common
alba Mill.	Less common
Silene antirrhina L.	Occasional
Armeria L.	Occasional
noctiflora L.	Occasional
latifolia (Mill.) Britten & Rendle. •	Occasional
Saponaria officinalis L.	Common
Dianthus Armeria L.	Rare

Portulacaceæ

Claytonia virginica L.	Less common than the next
caroliniana Michx.	Not rare
Portulaca oleracea L.	Common

Nymphæaceæ

Nymphæa advena Ait.	Common
Castalia odorata (Ait.) Woodville & Wood.	Common
Brasenia Schreberi Gmel.	Common

Ranunculaceæ

Ranunculus aquatilis L., var. capillaceus DC.	
delphinifolius Torr.	
Flammula L., var. reptans (L.) Mey.	Common
sceleratus L.	
micranthus Nutt.	
abortivus L.	Common
recurvatus Poir.	Common
fascicularis Muhl.	Rare
septentrionalis Poir.	Common
repens L.	A lawn pest, Common

<i>pennsylvanicus</i> L. f.	
<i>bulbosus</i> L.	Not common
<i>aeris</i> L.	Common
“ var. <i>Steveni</i> (Andrz.) Lange.	Common
<i>Thalictrum revolutum</i> DC.	Common
<i>polygamum</i> Muhl.	Common
<i>Anemonella thalictroides</i> (L.) Spach.	Rare
<i>Hepatica triloba</i> Chaix.	Common
<i>acutiloba</i> DC.	Rare
<i>Anemone cylindrica</i> Gray.	Common
<i>virginiana</i> L.	Common
<i>quinquefolia</i> L.	Common
<i>Clematis virginiana</i> L.	Common
<i>Caltha palustris</i> L.	Locally abundant
<i>Coptis trifolia</i> (L.) Salisb.	Common
<i>Aquilegia canadensis</i> L.	Common
<i>Actæa rubra</i> (Ait.) Willd.	Common
<i>alba</i> (L.) Mill.	Common

Berberidaceæ

<i>Berberis vulgaris</i> L.	Common
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Lauraceæ

<i>Sassafras variifolium</i> (Salisb.) Ktze.	Common
<i>Benzoin æstivale</i> (L.) Nees.	Rare?

Papaveraceæ

<i>Sanguinaria canadensis</i> L.	Locally abundant
<i>Chelidonium majus</i> L.	Common

Fumariaceæ

Dicentra Cucullaria (L.) Bernh.	Rare
canadensis (Goldie) Walp.	Rare
Corydalis sempervirens (L.) Pers.	Common
Fumaria officinalis L.	Occasional

Cruciferæ

Berteroa incana (L.) DC.	Becoming common
Lepidium virginicum L.	Common
Subularia aquatica L. Very abundant at Lake Massabesic in Manchester and Auburn. (See Notes.)	
Capsella Bursa-pastoris (L.) Medic.	Common
Brassica nigra (L.) Koch.	Common
campestris L.	Common
Sisymbrium officinale (L.) Scop.	Common
altissimum L.	Becoming common
Sophia L.	Rare
Hesperis matronalis L.	An occasional escape
Erysimum cheiranthoides L.	Not common
Radicula Nasturtium-aquaticum (L.) Britten & Rendle.	Common
sylvestris (L.) Druce.	Rare
palustris (L.) Moench.	Common
Armoracia (L.) Robinson.	Common
Barbarea vulgaris R. Br.	Common
Dentaria diphylla Michx.	
Concord. (<i>Miss S. F. Sanborn</i>)	Rare
Cardamine pennsylvanica Muhl.	Common
[flexuosa Britton] a form of the preceding	Common
Arabis Canadensis (L.) Pelham.	Rare

Sarraceniaceæ

Sarracenia purpurea L. Common

Droseraceæ

Drosera rotundifolia L. Common

longifolia L. Common

Crassulaceæ

Penthorum sedoides L. Common

Sedum acre L. Common

purpureum Tausch. Common

Sempervivum tectorum L. Occasional

Saxifragaceæ

Saxifraga pennsylvanica L. Common

virginiensis Michx. Common

Tiarella cordifolia L. Common

Mitella diphylla L.

nuda L.

Chrysosplenium americanum Schwein. Common

Ribes Cynosbati L. Concord. (*Miss M. A. Carter*) Rare?

floridum L'Her. Rare?

prostratum L'Her. Chichester. Candia. Rare?

Hamamelidaceæ

Hamamelis virginiana L. Common

Platanaceæ

Platanus occidentalis L. Abundant along streams

Rosaceæ

- Spiræa latifolia** Borkh. Common
tomentosa L. Common
Pyrus Malus L. Common
arbutifolia (L.) L. f., var. **atropurpurea** (Britton)
 Robinson. Less common than the next
melanocarpa (Michx.) Willd. Common
americana (Marsh.) DC. Common
sitchensis (Roem.) Piper. Manchester. Concord. Rare
Amelanchier canadensis (L.) Medic. Common
oblongifolia (T. & G.) Roem.
Cratægus. Species not as yet determined.
Fragaria virginiana Duchesne. Common
vesca L.
 “ var. **americana** Porter.
Potentilla arguta Pursh. Rare
monspeliensis L. Common
argentea L. Common
fruticosa L. Locally abundant
tridentata Ait. Hooksett Pinnacle and northward
pumila Poir.
canadensis L. Common
 “ var. **simplex** (Michx.) T. & G.
Geum canadense Jacq. Common
virginianum L. Common
macrophyllum Willd. Common
strictum Ait. Common
rivale L. Common
Rubus idæus L., var. **aculeatissimus** (C. A. Mey.)
 Regel & Tiling. Common
neglectus Peck. Not common

occidentalis L.	Common
odoratus L.	Common
triflorus Richards.	Common
allegheniensis Porter.	Common
hispidus L.	Common
villosus Ait.	Common
Dalibarda repens L.	Common
Agrimonia gryposepela Wallr.	Common
Sanguisorba canadensis L.	Common
Rosa blanda Ait.	Rare
cinnamomea L.	A persistent escape
rubiginosa L.	Rare?
nitida Willd.	Common
carolina L.	Common
virginiana Mill.	Common
humilis Marsh.	Common
Prunus serotina Ehrh.	Common
virginiana L.	Common
pennsylvanica L. f.	Common
cuneata Raf.	Common

Leguminosæ

Gleditsia triacanthos L.	An occasional escape
Cassia marilandica L.	Pelham. Rare?
Baptisia tinctoria (L.) R. Br.	Common in the southern towns
Lupinus perennis L.	Common
Plants with pink or white flowers are by no means rare.	
Trifolium arvense L.	Common
incarnatum L.	An occasional escape
pratense L.	Common

repens L.	Common
hybridum L.	Common
agrarium L.	Common
procumbens L.	Common
Melilotus officinalis (L.) Lam.	Common
alba Desr.	Common
Medicago sativa L.	Common
lupulina L.	Common
Tephrosia virginiana (L.) Pers.	Not rare in the southern towns
Robinia Pseudo-Acacia L.	Common
viscosa Vent.	Less common
hispida L.	A persistent escape
Coronilla varia L.	Occasional
Desmodium nudiflorum (L.) DC.	Common
grandiflorum (Walt.) DC.	Common
rotundifolium (Michx.) DC.	Not rare
bracteosum (Michx.) DC.	Manchester. Rare?
Dillenii Darl.	
paniculatum (L.) DC.	
canadense (L.) DC.	Common
marilandicum (L.) DC.	
Lespedeza virginica (L.) Britton.	Not rare
frutescens (L.) Britton.	Not rare
hirta (L.) Hornem.	Common
capitata Michx.	Common
Vicia sativa L.	Common
angustifolia (L.) Reichard.	
hirsuta (L.) S. F. Gray.	
Cracca L.	Common

Lathyrus pratensis L. Manchester. (*L. B. Schwarz*) Rare

Apios tuberosa Moench. Common

Amphicarpa monoica (L.) Ell. Common

Linaceæ

Linum usitatissimum L. An occasional escape

sulcatum Riddell. Manchester. Apparently adventive

Oxalidaceæ

Oxalis Acetosella L. Common in the northern towns

violacea L.

stricta L. Common

Geraniaceæ

Geranium maculatum L. Common

Robertianum L. Rare

Bicknellii Britton. Not common

Polygalaceæ

Polygala paucifolia Willd. Common

polygama Walt. Common

sanguinea L. Common

verticillata L. Nashua. Concord. Not common

Euphorbiaceæ

Acalypha virginica L. Common

Euphorbia maculata L. Common

Cyparissias L. Common

Callitrichaceæ

Callitriche palustris L. Common

Anacardiaceæ

- Rhus typhina** L. Common
glabra L. Common
copallina L. Common
Vernix L. Common in the southern towns
 Also found at Concord. (*Miss S. F. Sanborn*)
Toxicodendron L. Common

Aquifoliaceæ

- Ilex verticillata** (L.) Gray. Common
lævigata (Pursh) Gray. Rare
Nemopanthus mucronata (L.) Trel. Common

Celastraceæ

- Celastrus scandens** L. Common

Aceraceæ

- Acer pennsylvanicum** L. Common
spicatum Lam. Common
saccharum Marsh. Common
saccharinum L. Common
rubrum L. Common

Balsaminaceæ

- Impatiens pallida** Nutt. Manchester. (*L.B.Schwarz*) Rare
biflora Walt. Common

Rhamnaceæ

- Ceanothus americanus** L. Common

Vitaceæ

<i>Psedera quinquefolia</i> (L.) Greene.	Common
<i>Vitis labrusca</i> L.	Common
<i>æstivalis</i> Michx.	Common
<i>vulpina</i> L.	Common

Tiliaceæ

<i>Tilia americana</i> L.	Common
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Malvaceæ

<i>Malva rotundifolia</i> L.	Common
<i>moschata</i> L.	Occasional
<i>Hibiscus Trionum</i> L.	Occasional

Hypericaceæ

<i>Hypericum perforatum</i> L.	Common
<i>punctatum</i> Lam.	Common
<i>ellipticum</i> Hook.	Common
<i>boreale</i> (Britton) Bicknell.	
<i>mutilum</i> L.	Common
<i>majus</i> (Gray) Britton	Common
<i>canadense</i> L.	Common
<i>gentianoides</i> (L.) BSP.	Common
<i>virginicum</i> L.	Common

Cistaceæ

<i>Helianthemum canadense</i> (L.?) Michx.	Common
<i>majus</i> BSP.	Common
<i>Hudsonia ericoides</i> L.	
Hooksett. Concord.	Locally abundant

Lechea intermedia Leggett.	Common
maritima Leggett.	Common
“ var. interior Robinson.	Common
tenuifolia Michx. Pelham. (<i>F. W. B.</i>)	Very rare

Violaceæ

Viola pedata L.	Not rare in the southern towns Locally abundant at Manchester.
cucullata Ait.	Common
fimbriatula Sm.	Common
lanceolata L.	Common
primulifolia L.	Less common
pallens (Banks) Brainerd.	Common
rotundifolia Michx.	Not rare
pubescens Ait.	Common
scabriuscula Schwein.	Less common
conspersa Reichenb.	Common

Lythraceæ

Decodon verticillatus (L.) Ell.	Common
Lythrum alatum Pursh.	Concord. (<i>Miss S. F. Sanborn</i>) Very rare
Salicaria L.	Occasional

Melastomaceæ

Rhexia virginica L. Manchester. Goffstown.	Rare?
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Onagraceæ

Ludvigia palustris (L.) Ell.	Common
Epilobium angustifolium L.	Common
molle Torr. (<i>E. strictum</i> Muhl.?)	Common

densum Raf. (E. lineare Muhl.?)	Common
coloratum Muhl.	Common
adenocaulon Haussk.	Common
Oenothera cruciata Nutt.	Not rare
biennis L.	Common
pumila L.	Common
Circaea lutetiana L.	Common
intermedia Ehrh.	Common ?
alpina L.	Common ?

Haloragidaceæ

Proserpinaca palustris L.	Common
pectinata Lam.	Common

Araliaceæ

Aralia racemosa L.	Common
hispida Vent.	Common
nudicaulis L.	Common
Panax trifolium L.	Common

Umbelliferæ

Sanicula marilandica L.	Common
Hydrocotyle americana L.	Common
Ozmorhiza longistylis (Torr.) DC. Manchester.	
Cicuta maculata L.	Common
bulbifera L.	Common
Carum Carvi L.	Occasional
Petroselinum hortense Hoffm.	Occasional
Sium cicutæfolium Schrank.	Common
Cryptotaenia canadensis (L.) DC.	
Zizia aurea (L.) Koch.	Common

Pastinaca sativa L.	Common
Angelica atropurpurea L.	Not rare
Daucus Carota L.	A pest in fields. Common

Cornaceæ

Cornus canadensis L.	Common
florida L.	Not rare
circinata L'Her.	Not rare
Amomum Mill.	Common
stolonifera Michx.	Common
paniculata L'Her.	Common
alternifolia L. f.	Common
Nyssa sylvatica Marsh.	Common

Ericaceæ

Clethra alnifolia L.	Common
Chimaphila umbellata (L.) Nutt.	Common
Moneses uniflora (L.) Gray.	Common northward
Pyrola secunda L.	Common
chlorantha Sw.	Common
elliptica Nutt.	Common
americana Sweet.	Common
Monotropa uniflora L.	Common
Hypopitys L.	Common
Ledum grœnlandicum Oeder.	
East Concord. (<i>Mrs. L. F. Clough</i>)	Rare
Rhododendron canescens (Michx.) G. Don.	Common
canadense (L.) BSP.	Common
Flowers sometimes white.	
maximum L.	Manchester. Hopkinton. Rare

Kalmia latifolia L.	Common
angustifolia L.	Common
polifolia Wang. Manchester.	Rare
Andromeda glaucophylla Link.	Common
Lyonia ligustrina (L.) DC.	Common
Chamaedaphne calyculata (L.) Moench.	Common
Epigæa repens L.	Common
Gaultheria procumbens L.	Common
Arctostaphylos Uva-ursi (L.) Spreng.	Common
Chiogenes hispidula (L.) T. & G.	Common in the northern towns
Gaylussacia dumosa (Andr.) T. & G.	
frondosa (L.) T. & G. Pelham.	Rare?
baccata (Wang.) C. Koch.	Common
“ forma glaucocarpa (Robinson) Mackenzie.	Common
“ “ leucocarpa (Porter) Fernald.	Occasional
Vaccinium pennsylvanicum Lam.	Common
“ var. nigrum Wood.	Common
canadense Kalm.	Common in the northern towns
vacillans Kalm.	Common
corymbosum L.	Common
atrococcum (Gray) Heller.	Common
Oxycoccus L.	Not common
macrocarpon Ait.	Common

Primulaceæ

Lysimachia punctata L.	Common
quadrifolia L.	Common
producta (Gray) Fernald.	
terrestris (L.) BSP.	Common

Nummularia L.	An occasional escape
thyrsiflora L.	
Steironema ciliatum (L.) Raf.	Common
lanceolatum (Walt.) Gray.	Common
Trientalis americana (Pers.) Pursh.	Common
Anagallis arvensis L.	A rare escape

Oleaceæ

Fraxinus americana L.	Common
pennsylvanica Marsh.	Common
nigra Marsh.	Common
Ligustrum vulgare L.	An occasional escape

Gentianaceæ

Gentiana crinita Froel.	Not rare, but in danger of extermination
Saponaria L.	Pelham. Rare
Andrewsii Griseb.	Common
linearis Froel.	Common
Bartonia virginica (L.) BSP.	Common
Menyanthes trifoliata L.	Common
Nymphoides lacunosum (Vent.) Fernald.	
	Cohas Brook, Manchester. Rare

Apocynaceæ

Vinca minor L.	An occasional escape
Apocynum androsæmifolium L.	Common
cannabinum L.	Common

Asclepiadaceæ

Asclepias tuberosa L.	Merrimack.	Not common
purpurascens L.		Common
incarnata L.		Common
“	var. pulehra (Ehrh.) Pers.	Common
syriaca L.		Common
amplexicaulis Sm.		
	Common, at least as far north as Manchester	
phytolaccoides Pursh.		Common

Convolvulaceæ

Convolvulus spithameus L.		
sepium L.		
Cuscuta Gronovii Willd.		Common

Polemoniaceæ

Phlox subulata L.		A common escape
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Boraginaceæ

Cynoglossum boreale Fernald.		
Lappula virginiana (L.) Greene.		
Symphytum officinale L.		
Myosotis scorpioides L.		
laxa Lehm.	Manchester. (<i>L. B. Schwarz</i>)	Rare
virginica (L.) BSP.	Manchester. (<i>F. W. B.</i>)	Not common
Echium vulgare L.	Concord. (<i>Miss S. F. Sanborn</i>)	Rare

Verbenaceæ

Verbena urticæfolia L.		Common
angustifolia Michx.		Common
hastata L.		Common

Labiatae

Teucrium canadense L.**occidentale** Gray.**Trichostema dichotomum** L.

Common, at least as far north as Manchester

Scutellaria lateriflora L.

Common

galericulata L.

Common

Nepeta Cataria L.

Common

hederacea (L.) Trevisan. Common, fast becoming a pest**Prunella vulgaris** L.

Common

Physostegia virginiana (L.) Benth. An occasional escape**Galeopsis Tetrahit** L.

Common

Ladanum L. Suprisingly abundant at Sandwich in
borders of fields and by roadsides. (*F. W. B.*)**Leonurus Cardiac** L.

Common

Stachys palustris L.**Monarda didyma** L.**fistulosa** L. Bedford. Sandwich. (*F. W. B.*)“ **var. rubra** Gray. Sandwich. “**punctata** L.

Escaped from cultivation?

Hedeoma pulegioides (L.) Pers.**Satureja vulgaris** (L.) Fritsch.**Pycnanthemum flexuosum** (Walt.) BSP.

Common

virginianum (L.) Durand & Jackson.

Common

incanum (L.) Michx.

Common

muticum (Michx.) Pers.

Common

Thymus Serpyllum L.Concord. (*Miss S. F. Sanborn*) Rare**Lycopus virginicus** L.

Common

uniflorus Michx.

Common

americanus Muhl.

Common

Mentha longifolia (L.) Huds.	Manchester.	On dumps
rotundifolia (L.) Huds.	An occasional escape	
spicata L.		Common
piperita L.		Common
gentilis L.		Not rare
arvensis L., var. canadensis (L.) Briquet.		Common
Collinsonia canadensis L.	Pelham. (F. W. B.)	
No other station yet reported.		

Solanaceæ

Solanum Dulcamara L.		Common
nigrum L.		Not common
carolinense L.	Occasional in cultivated grounds	
Physalis pruinosa L.		In waste places
heterophylla Nees.		In waste places
Datura Stramonium L.		On dumps
Tatula L.		On dumps

Scrophulariaceæ

Verbascum Thapsus L.		Common
Linaria vulgaris Hill.		Common
canadensis (L.) Dumont.		Common
Scrophularia leporella Bicknell.	Manchester.	Rare
Pentstemon hirsutus (L.) Willd.		Not common
lævigatus Ait., var. Digitalis (Sweet) Gray.		Rare
Chelone glabra L.		Common
Mimulus ringens L.		Common
Ilysanthes dubia (L.) Barnhart.		Common
anagallidea (Michx.) Robinson.		Rare
Lake Massabesic, Manchester. (F. W. B.)		
Gratiola virginiana L.		Not common
aurea Muhl.		Common

Veronica americana Schwein.**scutellata** L. Common**officinalis** L.**Chamædrys** L.**serpyllifolia** L. Common**peregrina** L.**Gerardia pedicularia** L. Common**flava** L. Less common than the next**virginica** (L.) BSP. Common**paupercula** (Gray) Britton. Common**tenuifolia** Vahl. Manchester.

Not rare in the southern towns

Castilleja coccinea (L.) Spreng. Pelham. Rare**Melampyrum lineare** Lam. Common**Pedicularis canadensis** L. Common**Lentibulariaceæ****Utricularia vulgaris** L., var. **americana** Gray. Common**gibba** L. Manchester. (*F. W. B.*) Rare**intermedia** Hayne. Concord. (*Miss S. F. Sanborn*) Rare**purpurea** Walt. Concord. (*Mrs. L. S. Clough*) Rare**resupinata** B. D. Greene. Manchester. (*F. W. B.*) Rare**cornuta** Michx. Common**Orobanchaceæ****Epifagus virginiana** (L.) Bart. Common**Conopholis americana** (L. f.) Wallr.Meredith. (*F. W. B.*) Rare**Orobanche uniflora** L. Common

Plantaginaceæ

Plantago major L.	Common
Rugelii Dcne.	The most abundant species
lanceolata L.	Common
aristata Michx.	Manchester. Rare ?

Rubiaceæ

Galium aparine L.	Common
verum L.	Occasional
pilosum Ait. Pelham and Hudson. (<i>F. W. B.</i>)	Rare ?
circæzans Michx.	Common
lanceolatum Torr.	Common
boreale L. Manchester. (<i>L. B. Schwarz</i>)	Not common
Mollugo L.	Recently introduced
palustre L.	Not rare
trifidum L.	Common
asprellum Michx.	Common
triflorum Michx.	Common
Mitchella repens L.	Common
Cephalanthus occidentalis L.	Common
Houstonia cærulea L.	Common
longifolia Gaertn.	Locally abundant

Caprifoliaceæ

Diervilla Lonicera Mill.	Common
Lonicera cærulea L., var. villosa (Michx.) T. & G.	
Manchester. (<i>W. H. Huse</i>)	Rare
canadensis Marsh.	Common
Linnæa borealis L., var. americana (Forbes) Rehder.	
	Not common

Triosteum aurantiacum Bicknell.	
Hudson. (<i>F. W. B.</i>)	Collected but once
Viburnum alnifolium Marsh.	Common
Opulus L., var. americanum (Mill.) Ait.	Common
acerifolium L.	Common
dentatum L.	Common
cassinoides L.	Common
Lentago L.	Common
Sambucus canadensis L.	Common
racemosa L.	Less common

Cucurbitaceæ

Sicyos angulatus L.	Common
Echinocystis lobata (Michx.) T. & G.	Common

Campanulaceæ

Specularia perfoliata (L.) A. DC.	Rare?
Campanula rapunculoides L.	An occasional escape
rotundifolia L.	Common
aparinoides Pursh.	Common

Lobeliaceæ

Lobelia cardinalis L.	Common
spicata Lam.	Common
inflata L.	Common
Dortmanna L.	Common

Compositæ

Eupatorium purpureum L.	Common
verbenæfolium Michx.	Common
pubescens Muhl. Manchester.	
perfoliatum L.	Common
urticæfolium Reichard.	Common

Mikania scandens (L.) Willd.	Goffstown.	Rare?
Liatris scariosa Willd.		Not common
Solidago squarrosa Muhl.	Laconia. Sandwich.	Not common
caesia L.		Common
latifolia L.		Not common
bicolor L.		Common
puberula Nutt.		Common
uliginosa Nutt.		Common
speciosa Nutt.		Common
patula Muhl.		
arguta Ait.		Common
junceae Ait.		Common
neglecta T. & G.		
unilugulata (DC.) Porter.		
odora Ait.	Manchester.	Not common
ulmifolia Muhl.		Common
rugosa Mill.		Common
nemoralis Ait.		Common
canadensis L.		Common
serotina Ait.		Common
“ var. gigantea (Ait.) Gray.		Common
graminifolia (L.) Salisb.		Common
Aster divaricatus L.		Common
uacrophyllus L.		Common
radula Ait.		Common
novae-angliae L.	On dumping grounds	
patens Ait.	Manchester.	Not rare
undulatus L.		Common
cordifolius L.		Common
laevis L.		Common

polyphyllus Willd. Manchester.	Rare
ericoides L.	Not common
multiflorus Ait.	Common
dumosus L.	Common
vimineus Lam.	Common
lateriflorus (L.) Britton.	Common
“ var. hirsuticaulis (Lindl.) Porter.	Common
paniculatus Lam.	Not common
junceus Ait.	Not common
longifolius Lam.	Not common
novi-belgii L.	Common
tardiflorus L.	Common
prenanthoides Muhl.	
puniceus L.	Common
umbellatus Mill.	Common
linariifolius L.	Common
acuminatus Michx.	Common
nemoralis Ait.	
Stevens Pond, Manchester. (F. W. B.)	Rare
Erigeron pulchellus Michx.	Common
philadelphicus L.	Common
annuus (L.) Pers.	Common
ramosus (Walt.) BSP.	Common
canadensis L.	Common
Sericocarpus asteroides (L.) BSP.	Common
linifolius (L.) BSP.	Common
Antennaria Parlinii Fernald.	Common
canadensis Greene.	
plantaginifolia (L.) Richards.	Common
fallax Greene.	

neodioica Greene.	
neglecta Greene.	
Anaphalis margaritacea (L.) B. & H.	Common
Gnaphalium polycephalum Michx.	Common
decurrens Ives.	Common
uliginosum L.	Common
purpureum L.	
Inula Helenium L.	Not rare
Ambrosia trifida L.	Not common
artemisiifolia L.	Common
Xanthium canadense Mill.	Common
" commune Britton.	Common
Heliopsis scabra Dunal.	Rare
Rudbeckia hirta L.	Common
laciniata L. Pelham.	Not common
Helianthus giganteus L.	
Manchester. Concord.	Not common
divaricatus L.	Common
strumosus L.	Common
decapetalus L.	Common
tuberosus L.	Common
Bidens frondosa L.	Common
connata L.	Common
cernua L.	Common
Beckii Torr. Concord. (Miss S. F. Sanborn)	
Galinsoga parviflora Cav.	Becoming a troublesome weed
Helenium autumnale L.	Rare
Achillea Millefolium L.	Common
Anthemis Cotula L.	Common
arvensis L.	Occasional
Chrysanthemum Leucanthemum L.	Common

Tanacetum vulgare L.	Common
Artemisia vulgaris L.	Common in waste places
Tussilago Farfara L.	Not common
Petasites palmatus (Ait.) Gray.	
Manchester.	Concord.
	Rare
Erechtites hieracifolia (L.) Raf.	Common
Senecio aureus L.	Common
Arctium Lappa L.	Sandwich. Tamworth. Not common
minus Bernh.	Common
Cirsium lanceolatum (L.) Hill.	Common
muticum Michx.	Common
pumilum (Nutt.) Spreng.	Common
arvense (L.) Scop.	Common
palustre (L.) Scop.	East Andover. (<i>G. W. Holt</i>)
Centaurea nigra L.	Occasional
Cichorium Intybus L.	Roadsides. Not common
Krigia Virginica (L.) Willd.	Common
Leontodon autumnalis L.	Rare?
Tragopogon porrifolius L.	An occasional escape
pratensis L.	An occasional escape
Taraxacum officinale Weber.	Common
erythrospermum Andrz.	Not rare
Sonchus arvensis L.	Becoming common
oleraceus L.	Rather common
asper (L.) Hill.	Rare?
Lactuca scariola L., var. integrata Gren. & Godr.	Recently introduced
canadensis L.	Common
spicata (Lam.) Hitchc.	Common

Prenanthes alba L.	Common
serpentaria Pursh.	Common
trifoliolata (Cass.) Fernald.	Common
altissima L.	Common
“ var. hispidula Fernald. Manchester.	

Hieracium aurantiacum L.	Becoming a pest northward
venosum L.	Common
paniculatum L.	Common
marianum Willd. Manchester. (<i>L. B. Schwarz</i>)	Rare
scabrum Michx.	Common
canadense Michx.	Common



Notes to Plant List.

1. *Botrychium obliquum* Muhl.

This polymorphous species is abundant throughout our range. All the named "varieties" occur, but so connected by intermediate forms that it seems impossible to separate them definitely. Moreover, all or most of the forms may often be found in the same station. The "variety" *dissectum* Spreng. is abundant, constituting at least 10 per cent of the species. The compiler was somewhat surprised to find this form as abundant at Sandwich, 60 miles north, as at Manchester. An old field, part orchard, yielded hundreds of plants of *B. obliquum*, about 15 per cent of them being good *dissectum*. As might be expected, the plants when growing in the open are stouter, more coriaceous and more copiously fruited than when growing in shade. This difference is particularly noticeable in the dissected forms, which when growing in damp shady places have the sterile segment of the frond thin and membranous and cut into exquisite lace-like patterns.

Both at Manchester and Sandwich were found interesting departures from the normal production of the sporophyll. In typical specimens a single sporophyll springs from near the base of the plant. The following abnormal forms were noted:

1. 2 or 3 sporophylls from the normal point:
2. 2 from the normal point, and 1 or 2 from near the base of the petiole of the sterile segment:
3. 1 from the normal point, and 1 or 2 from near the middle of the petiole of the sterile segment:
4. None from the normal point, 2 as in the preceding:
5. 1 from the normal point, 1 occupying the place of one of the ternate divisions of the sterile segment,

2. *Chamaecyparis thyoides* (L.) BSP.

The only station yet reported is the "rhododendron swamp" located in the northwest corner of Manchester, where the species is associated with *Rhododendron maximum* L. and *Nyssa sylvatica* Marsh. [See note on *Rhododendron maximum* below.]

3. *Juniperus communis* L.

Known only from Francestown, where there are arborescent forms approaching 4 meters in height, strikingly different in aspect and habit from the var. *depressa* Pursh, which is common everywhere.

4. *Digitaria filiformis* (L.) Koehler.

At Rock Rimmon, West Manchester. This is an exposed ledge, in the vicinity of which are ecological conditions favorable to a great variety in the flora, as the following names may show: *Asplenium platyneuron* (L.) Oakes., (rare in this vicinity), *Eragrostis capillaris* (L.) Nees., *Sorghastrum nutans* (L.) Nash., *Quercus Prinus* L., *Lespedeza frutescens* (L.) Britton., *Rhus Vernix* L.

5. *Leptoloma cognatum* (Schultes) Chase.

There are two stations of this species known, one in Bow (*Dr. A. A. Briggs*) and one in Concord (*F. W. B.*), both near the Merrimack River bank, where the land is subject to overflow during freshets and is largely covered with fine white sand.

6. *Sphenopholis obtusata* (Michx.) Scribn., var. *lobata* (Trin.) Scribn.

In Cohas Brook meadows, Manchester. Specimens are in the Gray Herbarium.

7. *Tridens flavus* (L.) Hitchc.

Abundant in the vicinity of a grist mill in Pelham. Probably introduced. Appearances indicated that it must have persisted for a number of years when first found by the compiler in 1899.

8. *Eragrostis Frankii* (Fisch. Mey. & Lall.) Steud.

Collected once near the track of a newly constructed electric road. Probably an immigrant from the West or South.

9. *Cypripedium arietinum* R. Br.

A few plants of this species were found by the compiler in Laconia, near Doe Mountain, Aug. 30, 1897. The station has been visited several times since, but, though careful search has been made there and in the vicinity, not a single plant has yet been found. A station was discovered in Franklin in 1904 by Alexis Proctor, a sharp-eyed boy, while searching for rare plants to be exhibited and studied in school. In 1905 the compiler visited the station and secured one specimen in fruit for the herbarium of the Institute.

10. *Cypripedium parviflorum* Salisb., var. *pubescens* (Willd.) Knight.

Some fifteen years ago a number of these plants were removed to a "wild bed" in a city lot. There they thrived and multiplied for several years. They soon began to manifest a marked change in appearance, becoming smaller and producing smaller flowers in which the lip was strongly compressed laterally, became more pointed at the apex and assumed a paler shade of yellow. Several plants of *C. parviflorum* which were set out at the same time remained constant to the type, the lip neither changing in shape nor losing the bright golden yellow tint exhibited in the native habitat. None of the plants of *C. parviflorum* survive. Those of the variety which survive seldom produce flowers.

11. *Habenaria fimbriata* (Ait.) R. Br.

[Mostly reprinted from Vol. I.]

Abundant in the vicinity of Manchester. A study of the forms is extremely interesting. There are two well marked forms which are so constant in their differences as to demand a special account. What may be called typical *H. fimbriata* begins to bloom, at least in "early" seasons, by the 1st of June. The flowers are scentless, except for the rank odor common to the orchid family, and are usually gone by the 1st of July. About the latter date the other form begins to flower, some plants being found in bloom as late as Aug. 25. In this form the flowers are richly scented, having a fragrance similar to that of *H. psychodes*, but less heavy and therefore more agreeable. The lip and petals are more deeply cut and the pedicels slenderer than in the early form and the whole plant has a more graceful and delicate aspect. There are several abundant stations of this late form known. In most of these the flowers vary in color from pinkish to rather dark purple. In one station, besides the plants with light and dark purple flowers, there are always some with pure white flowers.

The differences may be summarized thus :

Early form, June 1st to July 1st, flowers purple, not fragrant, rather stoutly pedicelled, with lip and petals not deeply cut ; late form, July 1st to Aug. 25th, flowers dark to light purple, pinkish or pure white, very fragrant, with rather slender pedicels and with lip and petals quite deeply cut.

So far as observed the two forms do not grow together. *H. psychodes*, comparatively rare in this vicinity, is found with or near both forms. The forms are persistent, being found in the same stations year after year. The personal observations of the compiler extend over a period of sixteen years. The white-flowered form had been known for an indefinite period before his observations began.

12. *Pogonia trianthophora* (Sw.) BSP.

[Reprinted from Vol. III.]

A station of this beautiful little orchid was discovered by the compiler on the shores of Lake Winnepesaukee, Aug. 12, 1896.(?) At this time the plants were very abundant, often growing in dense clusters or colonies. In a single patch of leaf-mold, about 14 by 8 inches in extent, no less than 120 plants were found in full flower. The plants behaved badly in drying, and specimens prepared for herbaria were very unsatisfactory. The next visit to the station was on Aug. 27, 1897, when the plants were very scarce and poorly developed. The last visit was on Aug. 18, 1901. While not as abundant as when the station was discovered, the plants were then sufficiently numerous and in good condition. A number of clumps and of single plants with the leaf-mold attached were packed in tin boxes with moss and successfully transported, reaching botanical friends in Massachusetts in fine condition. The collector having suspected, from both the habitat and the habit of the plants, that they were to some extent saprophytic or symbiotic, suggested to one of the recipients of his plants, Mr. R. G. Leavitt, a critical examination of the root system. The examination tended to prove that the plants are hemisaprophytes, deriving organic food from the humus. It also showed a particularly clear case of "mykorrhiza," certain fungi having penetrated the tissues of the root and also sent hyphæ from it in all directions, so that the root looked as if clothed with root hairs.

The paleness of the parts above ground and the feeble development of the chlorophyll are very noticeable. As far as observed, the plants all grow in leaf-mold and have no attachment to the soil beneath. In fact, the layer of leaf-mold is usually superposed on rock and the plants are most abundant in the little hollows between angular fragments of the rock where little or no other soil can have accumulated. The trees in the locality are mostly hemlock, maple, oak and beech, meeting white pine on the upper part of the slope. Other interesting

plants of the locality are *Orobanche uniflora* L., *Conopholis americana* (L. f.) Wallr., *Epifagus virginiana* (L.) Bart., *Monotropa uniflora* L., *M. Hypopitys* L.

13. *Pogonia verticillata* (Willd.) Nutt.

This species, noted in Vol. I of these Proceedings (1900) as "locally abundant," must now be set down as rare and in danger of extermination. In Manchester the station where it was the most abundant has been transformed into a plantation of *Solanum tuberosum*, doubtless more profitable to the owner of the land than the orchids, but less interesting to the botanist. At the other station the plants are greatly reduced in number. From the station in Auburn but a single plant has been secured since 1900. This was collected in September and bore two well developed capsules. Doubtless there are other stations of the species. When discovered it is to be hoped they will not become too well known.

14. *Spiranthes Romanzoffiana* Cham.

A station in Sandwich is located in open land near the top of a high hill. The plants are associated with *Botrychium ramosum* (Roth.) Aschers., *B. obliquum* Muhl., *Lycopodium clavatum* (L.), var. *monostachyon* Grev. & Hook., *Microstylis unifolia* (Michx.) BSP., and *Potentilla tridentata* Ait.

15. *Liparis liliifolia* (L.) Richard.

Collected in Manchester in 1895, but not found since. Two plants set out in a "wild bed" survived and flowered three years. The fourth year the plants were winter-killed, so that there remains not even an herbarium specimen.

16. *Liparis Loeselii* (L.) Richard.

Thus far reported only from Concord, where it was once collected by the compiler. Here, again, the march of agricultural progress has seriously diminished if not exterminated the species at the only known station.

17. *Betula nigra* L.

Abundant in Pelham along Beaver Brook for at least four miles north of the Massachusetts line. Undoubtedly members of a westerly extension into this corner of New Hampshire of the remarkable station discovered many years ago by Mr. Geo. B. Emerson at Spickett Falls in Methuen, Mass., (which adjoins Pelham on the southeast), and described by him in his "TREES AND SHRUBS OF MASSACHUSETTS," (q. v.).

The number of individual plants must mount into the thousands. The trees may be seen in abundance at either of the three old stone bridges which span Beaver Brook near Pelham Center. Near the north bridge are particularly fine large trees and also handsome groves of them. The species should be looked for in the southern parts of Salem and Hudson.

18. *Quercus prinoides* Willd.

Abundant as far as several miles north of Manchester, but not yet observed at Concord. Arborescent plants are not rare. Some in Hudson measured 4 m. in height, with stems 1.25 dm. in diameter. Others in Manchester were 5 m. in height with stems 8 cm. in diameter. These large forms appeared to be old, and they bore little or no fruit. So far as observed they did not show any approach to *Q. Muhlenbergii* Engelm., except in size.

19. *Quercus Prinus* L.

Two stations of this species have been examined, one in Manchester, at Rock Rimmon, the other in Auburn, six miles distant. The leaves vary greatly in outline, those on the finest, best developed trees being often as nearly entire as those of typical *bicolor*, or of the Chestnut, while on stunted, ill developed trees they are often as deeply lobed as in *alba*. There are also at both stations trees with the fruit long-peduncled as in *bicolor*, the leaves accompanying them being always of the less deeply lobed form.

20. *Quercus rubra* L., var. *ambigua*

(Michx. f.) Fernald.

It is a relief to find this form authoritatively named as a variety of *rubra* rather than *coccinea*. The trees observed in this vicinity have altogether the aspect and habit of *rubra*, differing from the type only in their fruit, which somewhat resembles that of *coccinea*. The fruit varies on different plants, being large on some and small on others, having the cups sometimes thick and sometimes thin, but always deep, and the scales sometimes appressed and sometimes slightly squarrose. The freeness of the trunk from lichens is also a character of some importance, the bark in *coccinea* being usually more or less infested with them, while that of *rubra* is noticeably free from them.

21. *Quercus coccinea* Muench.

As was reported in a note to *Quercus* in Vol. I of these Proceedings, (1900), this is at Manchester the most abundant of the eight species named. The eastern part of the city may fairly be said to have been originally laid out in groves of scarlet oak. Many of the trees which were spared when the land was cleared remain as shade trees. In autumn the characteristic tint of the foliage sheds a blaze of glory over Derryfield Park and Oak Hill and the dry hills farther to the east. The largest trees thus far noted are from 60 to 70 ft. high. In general the species appears to be more subject to decay and consequently shorter lived than *rubra* or *velutina*. Sound and vigorous trees are, perhaps, the handsomest of the genus.

22. *Ulmus fulva* Michx.

The two trees reported in Vol. I (1900) as growing at "Arcadia" by Piscataquog river have unfortunately been destroyed during the formation of the artificial lake which has replaced the meadows for a mile or more above Kelley's Falls. It is greatly to be desired that thorough search be made for the

species higher up the river valley, since it is not unlikely that the two trees known were indigenous. The fact that there were old houses and abandoned farms in the vicinity renders the spontaneousness of the trees in some degree questionable. On the other hand, the location of the trees with reference to the houses was not such as to favor the supposition that they were planted by the hand of man.

23. *Subularia aquatica* L.

In 1906, while hunting for shore plants at Lake Massabesic, the compiler found a few plants of this very local crucifer which had been driven by the south wind upon Severance's beach, a long stretch of fine white "scouring sand" on the north shore, in the town of Auburn. In October 1907, the lake being unusually low, more of the bottom was exposed and the plants were found in great abundance. In October 1908, when the extraordinary drought of that season had still further reduced the level of the lake, so that the surface was 2 ft. below the top of the dam at the outlet and 5 ft. below the level of the lake when full, a much larger area of sand was exposed. There was found (Oct. 8) to be an almost continuous belt of the plants from 2 ft. to 2 rods wide, the greater part still immersed. extending for a distance of not less than 1500 ft. A square foot of sand, measured off where the plants were thickly sown, contained by actual count more than 100 plants.

[See also *Rhodora*, November 1908.]

24. *Hudsonia ericoides* L.

There is an immense station of this species at Concord on the high sand bluffs east of Merrimack river. The principal station examined extends along the top and riverward slope of the bluff for more than a quarter of a mile. There is more on the next bluff northward, and still more south of the highway

which runs below the principal station. The soil is dry, the bluffs being composed of yellow river sands. The old name "Sugar Bowl," applied to the most conspicuous bluff, was suggested to our forefathers by the resemblance of this sand to the brown sugar so commonly used in their day. There are no rocks in the vicinity.

There is another station at Hooksett, where the Suncook branch of the B. & M. R. R. crosses the river. Here are rocks in abundance.

25. *Nyssa sylvatica* Marsh.

The tupelo, one of the most interesting of our native trees, is much less rare than is generally supposed, being irregularly distributed throughout our area. At Deer Neck, Lake Massabesic, the trees may be seen in great abundance. The largest trees observed are in the "rhododendron swamp," (see note below), where they are associated with *Chamæcypris thyoides* and *Rhododendron maximum*. When the swamp was invaded by "deforesters" some 20 years ago the axe willingly spared these tough old giants.

Large trees may often be recognized at a distance by the peculiar contour of the trunk, which has a columnar aspect, the diameter diminishing but slightly from base to summit. The trunk is usually bare for nearly half its length and often appears as if broken short off at the top. The bark is very thick and rough, and is seamed and cross-seamed in a characteristic manner. The horizontality of the branches also constitutes a good "field mark."

26. *Rhododendron maximum* L.

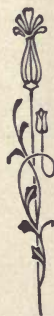
The Manchester station of this beautiful species is a high wet swamp, very difficult of access. Here the plants are associated with *Chamæcypris thyoides* and *Nyssa sylvatica*, as noted above. They are usually in flower about July 4th. Since the

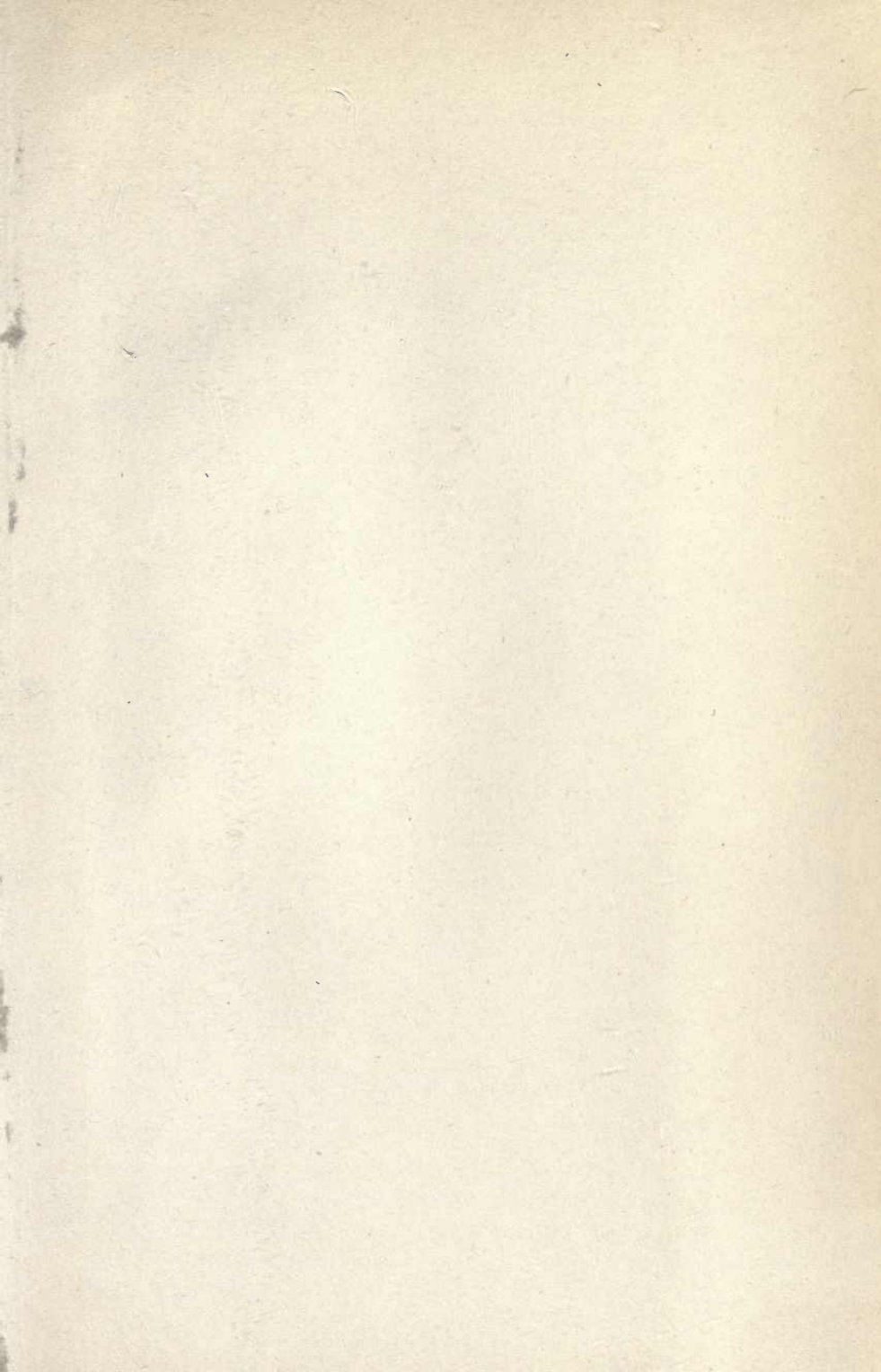
swamp was denuded of its trees the rhododendrons have not flowered as well as formerly, and after very cold winters the buds are mostly blighted. Little success has of late attended the transplanting of individuals.

There is also a station at Hopkinton, about 20 miles farther north.

Summary.

Number of Families represented..	.	.	.	103
Number of Genera represented	.	.	.	428
Number of Species	.	.	.	1063
Number of Varieties and Named Forms	.	.	.	<u>36</u>
Total Number of Names	.	.	.	1099





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